

# TYPES OF SCREENING

## Screening for TB disease

Screening for disease is appropriate in populations where the prevalence of active TB disease is high (e.g. homeless persons, migrant and seasonal workers, the foreign born). Screening for disease should begin with a clinical assessment for symptoms suggestive of tuberculosis. Those with TB-like symptoms should then undergo further evaluation, including sputum examination and/or chest radiography to either confirm or exclude the presence of disease. In some circumstances, screening with chest radiographs alone may be appropriate. However, this practice should be restricted to those settings where the risk of disease and of disease transmission are high and where a symptom evaluation is likely to be ineffective. It is suggested that this office be consulted before any radiographic screening program is initiated. Additionally, all persons with TB-like symptoms and sputum or radiographic examination suggestive of tuberculosis should be started on a standard, four-drug, anti-tuberculous regimen currently recommended by the American Thoracic Society/Centers for Disease Control and Prevention (ATS/CDC), pending final confirmation of the diagnosis.

## Screening for TB infection (Latent TB Infection – LTBI)

There are currently two methods for detecting tuberculosis infection: The Mantoux tuberculin skin test (TST) and an Interferon Gamma Release Assay (IGRA) blood test.

Patients must be carefully assessed for risk factors PRIOR to administration of either test. This assessment may be carried out individually or for a population group (homeless persons, foreign born from high prevalence countries). The evaluation must also include some assessment as to the likelihood that treatment for LTBI will be completed if prescribed. Populations or individuals that will not or cannot complete treatment for LTBI should not, in general, be screened for infection. Patients who are candidates for screening should undergo a clinical assessment, including symptom review. Tuberculous disease must be excluded in patients in high-risk groups with TB-like symptoms, regardless of the results of the skin test or IGRA.

All tuberculin skin testing (TST) performed for the evaluation of tuberculous infection must utilize 5TU (0.1cc) PPD applied intradermally by the Mantoux method. Multiple puncture techniques (e.g. Tine testing) have insufficient sensitivity to be of value and their use, even in newborns and infants, should be abandoned. Current CDC/ATS guidelines for interpretation of the tuberculin skin test must be utilized. Once new tuberculous infection is identified, disease must be excluded with a chest radiograph.

An Interferon Gamma Release Assay (IGRA) is a blood test that can determine if a person has been infected with TB bacteria. An IGRA tests a person's blood in a laboratory to measure how the immune system reacts to the TB bacteria. Two IGRAs

are approved by the U.S. Food and Drug Administration (FDA) and are available in the United States: QuantiFERON®-TB Gold in-Tube test and T-SPOT® TB test.

A positive TST or IGRA only means that TB infection is likely present in the body and additional testing is needed to determine if the person has active TB disease or latent TB infection (LTBI). The IGRA test is the preferred test for persons who have received the BCG vaccine and those who have a difficult time returning for a second appointment to read the TST test.

A recent chest radiograph (within 3 months) showing no evidence suggestive of tuberculosis disease is required before treatment for LTBI is initiated. Depending on clinical and radiographic characteristics, treatment for LTBI may then be offered. Patients on treatment for LTBI must be followed monthly to assess for TB-like symptoms as well as symptoms of drug side effects and toxicity. Additionally, some groups require laboratory monitoring. All screening programs must include defined measures for ensuring and monitoring compliance and completion of the prescribed course of treatment. No specific follow up plan is required after completion of treatment for LTBI, although patients should be instructed to return for evaluation if TB-like symptoms develop. The practice of obtaining routine follow-up chest x-rays, including annual screening radiographs should be abandoned